



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,160	08/02/2001	Alexander Steinberg	ERIC-0110	8014

7590

02/10/2005

Woodcock Washburn Kurtz  
Mackiewicz & Norris LLP  
46th Floor  
One Liberty Place  
Philadelphia, PA 19103

EXAMINER

AN, SHAWN S

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/921,160

Applicant(s)

STEINBERG ET AL.

Examiner

Shawn S An

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-30, 35 and 39-42 is/are rejected.
- 7) ☒ Claim(s) 31-34 and 36-38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/27/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Remarks***

1. Applicant's submission of terminal disclaimer as filed on 9/27/04 to overcome the rejection as filed on 6/24/04 has been acknowledged.

### ***Claim Objections***

2. Claim 26 is objected to because of the following informalities: On claim 26, line 3, the recited "form" should be changed to --from--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 25, 27, and 39-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Graham (5,502,482).

**Regarding claims 25 and 39**, Graham discloses a system/method for determining a position of a TV camera relative to a patterned panel being viewed by the TV camera, comprising:

Art Unit: 2613

means for identifying a plurality of edge points of the patterned panel from video signal produced by the camera (Fig. 1, 10)(col. 2, lines 45-48; col. 5, 14-17);

means for processing edge points to calculate a perspective of the pattern relative to the camera (col. 4, lines 25-39), wherein the means for processing comprises means for clustering the plurality of edge points and to specific lines using a slope and intercept process (col. 5, lines 14-57); and

means for determining a relative position of the camera relative to the patterned pattern by reference to the perspective of the pattern (Fig. 1, elements 20 and 26; col. 7, lines 30-35).

**Regarding claim 27**, Graham discloses a pattern of vertical and horizontal lines that delineate a color difference and wherein each identified edge point is disposed on one of the horizontal and vertical lines (col. 6, lines 25-29; col. 6, lines 53-65).

**Regarding claim 40**, Graham discloses a chroma-key panel (col. 3, lines 32-40).

**Regarding claims 41-42**, Graham discloses two or more distance coded family of lines such that the lines of each family intersect at a common point (Fig. 4; col. 6, lines 53-65).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 26 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (5,502,482).

**Regarding claim 26**, Graham discloses identifying a plurality of first edge points and a plurality of second edge points (Fig. 4; col. 2, lines 45-48))

Graham does not specifically disclose producing an edge image from the plurality of first edge points and the plurality of second edge points.

However, the Examiner takes official notice that a feature of producing an edge image from the plurality of first edge points and the plurality of second edge points are conventionally well known in the art for indicating depth information of an image.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art to incorporate the well known concept as above such as to determine the vanishing point of two lines for indicating the depth information of an image.

**Regarding claims 28 and 29,** Graham discloses analyzing all identified edge points (col. 2, lines 45-48; col. 5, lines 14-21)

Graham does not specifically disclose grouping some of the edge points into a first/second group corresponding to the horizontal/vertical lines, and allocating the edge points in the first/second group to be specific horizontal and vertical lines, respectively.

However, the Examiner takes official notice that a feature of grouping some of the edge points into a first/second group corresponding to the horizontal/vertical lines, and allocating the edge points in the first/second group to be specific horizontal and vertical lines, respectively, is conventionally well known in the art for determining whether or not an object exists in an image.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art to incorporate the well known concept as above such as to determine whether or not an object exists in an image.

7. Claims 30 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham as applied to claim 29 above, and further in view of Shimoura et al (5,638,116).

**Regarding claims 30 and 35,** Graham does not specifically disclose computing vanishing points of the horizontal and vertical lines after allocating the edge points, wherein the vanishing points are computed with a defined location error.

However, Shimoura et al teaches computing accurate vanishing points of the horizontal and vertical lines after allocating the edge points (col. 10, lines 22-32; col. 16, lines 7-18).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method for determining a position of a TV camera relative to a patterned panel being viewed by the TV camera to incorporate the Shibata et al's teaching as above so as to compute vanishing points of the horizontal and vertical lines after allocating the edge points, wherein the vanishing points are computed with a defined location error as an efficient way to recognize an image.

#### ***Allowable Subject Matter***

8. Claims 31-34 and 36-38 are objected to as being dependent upon a rejected base claim 25, but would be allowable: if any one of claim 31 or claim 34 or claim 36 is rewritten in independent form including all of the limitations of the base claim 25 and any intervening claims.

Dependent claims 31-34 and 36 recites novel features (imitations of claims 31, 34, and 36, emphasized), wherein the art of records fail to anticipate or make obvious the novel feature.

Accordingly, if the amendments are made to the claims listed above, and if rejected claims are canceled, the application would be placed in condition for allowance.

#### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S. An* whose telephone number is 703-305-0099. The Examiner can normally be reached on Flex hours (10).

10. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2613

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SSA

Primary Patent Examiner

2/6/05